Certa 100
Standard port size: 1"
Displacement 0.02 gallons per revolution

Capacity / Water Power / Additional power / Viscous Power / NIPR

Flow (GPM) vs. pump speed (rpm)

Capacity (GPM)

Water (2.500 CPS to 250.000 CPS)

Viscous Power (NIPR)

Notice: The diagrams show the relationship between flow (GPM), pump speed (rpm), water power (WHP), additional power (AHP), viscous power (VHP), and NIPR (PSIA) for various pressures (0 PSI to 150 PSI) and viscosities (2.500 CPS to 250.000 CPS).

References:
- Watson-Marlow Limited, 2017
- Water: 2.500 CPS to 250.000 CPS
- Viscous Power: NIPR (PSIA)
- Additional Power: AHP
- Water Power: WHP
- Total Power: HP = WHP + AHP + VHP

© Watson-Marlow Limited, 2017
Watson-Marlow® ®, MasoSine® Qdos®, Bredel®, and Flexicon® are trademarks of Watson-Marlow Limited and may not be used without the prior written consent of Watson-Marlow Limited. All intellectual property rights including patents, design rights, copyright, trademarks and database rights are fully reserved. Watson-Marlow Limited and all authors assert their moral right under the Copyright, Designs and Patents Act 1988 to be identified as the author of this work. No part of this document shall be reproduced, stored in a retrieval system, or transmitted by any means – electronic, mechanical, photocopying, recording, or otherwise – without written permission from Watson-Marlow Limited. No liability assumed for damages resulting from the use of the information contained herein.
Certa 200

Standard port size: 2" 
Displacement 0.03 gallons per revolution

Capacity / Water Power / Additional power / Viscous Power / NIPR

Flow (GPM)

pump speed (rpm)

0 10 20 30 40

0 100 200 300 400 500 600 700 800 900 1000

HP = WHP + AHP + VHP

NIPR (PSIA)

pump speed (rpm)

0 100 200 300 400 500 600 700 800 900 1000

Water

2.500 CPS
5.000 CPS
10.000 CPS
30.000 CPS
50.000 CPS
100.000 CPS
250.000 CPS

All viscosities - CPS
Sustainability curves

Certa 250
Standard port size: 2.5"
Displacement 0.06 gallons per revolution

Capacity / Water Power / Additional power / Viscous Power / NIPR

Flow (GPM) vs. pump speed (rpm)

HP = WHP + AHP + VHP

Water

All viscosities - CPS

“Watson-Marlow®”, MasoSine®, “Qdos”, “Bredel®”, and “Flexicon®” are the trademarks of Watson-Marlow Limited and may not be used without the prior written consent of Watson-Marlow Limited. All intellectual property rights including patents, design rights, copyright, trademarks and database rights are fully reserved. Watson-Marlow Limited and all authors assert their moral right under the Copyright, Designs and Patents Act 1988 to be identified as the author of this work. No part of this document shall be reproduced, stored in a retrieval system, or transmitted by any means – electronic, mechanical, photocopying, recording, or otherwise – without written permission from Watson-Marlow Limited. No liability assumed for damages resulting from the use of the information contained herein.
Certa 300
Standard port size: 3"
Displacement 0.13 gallons per revolution

Capacity / Water Power / Additional power / Viscous Power / NIPR

Flow (GPM) vs. pump speed (rpm)

HP = WHP + AHP + VHP

Water

All viscosities - CPS

Certa_300_Imp_Source_D3_MS-01 © Copyright 2017 Watson-Marlow Fluid Technology Group
“Watson-Marlow®”, MassoSin® “Qdos”, “Bredel®”, and “Flexicon®” are the trademarks of Watson-Marlow Limited and may not be used without the prior written consent of Watson-Marlow Limited. All intellectual property rights including patents, design rights, copyright, trademarks and database rights are fully reserved. Watson-Marlow Limited and all authors assert their moral right under the Copyright, Designs and Patents Act 1988 to be identified as the author of this work. No part of this document shall be reproduced, stored in a retrieval system, or transmitted by any means – electronic, mechanical, photocopying, recording, or otherwise – without written permission from Watson-Marlow Limited. No liability assumed for damages resulting from the use of the information contained herein.
HP = WHP + AHP + VHP

flow (GPM)

WHP

AHP

VHP

NIPR (PSIA)

pump speed (rpm)

Capacity / Water Power / Additional power / Viscous Power / NIPR

HP = WHP + AHP + VHP

Certa 400

Standard port size: 4"

Displacement 0.31 gallons per revolution
### Certa 600

**Standard port size:** 6"

Displacement: 0.72 gallons per revolution

---

**Capacity / Water Power / Additional Power / Viscous Power / NIPR**

<table>
<thead>
<tr>
<th>Flow (GPM)</th>
<th>450</th>
<th>400</th>
<th>350</th>
<th>300</th>
<th>250</th>
<th>200</th>
<th>150</th>
<th>100</th>
<th>50</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>pump speed (rpm)</td>
<td>0</td>
<td>100</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>500</td>
<td>600</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **0 PSI**
- **25 PSI**
- **50 PSI**
- **100 PSI**
- **150 PSI**
- **200 PSI**

**HP = WHP + AHP + VHP**

---

**WHP**

- **25 PSI**
- **50 PSI**
- **100 PSI**
- **150 PSI**
- **200 PSI**

---

**AHP**

- **25 PSI**
- **50 PSI**
- **100 PSI**
- **150 PSI**
- **200 PSI**

---

**VHP**

- **2.500 CPS**
- **5.000 CPS**
- **10.000 CPS**
- **30.000 CPS**
- **50.000 CPS**
- **100.000 CPS**
- **250.000 CPS**

---

**NPR (FSA)**

- **25**
- **20**
- **15**
- **10**
- **5**
- **0**

<table>
<thead>
<tr>
<th>pump speed (rpm)</th>
<th>0</th>
<th>100</th>
<th>200</th>
<th>300</th>
<th>400</th>
<th>500</th>
<th>600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>0</td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>2.500 CPS</td>
<td>0</td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>5.000 CPS</td>
<td>0</td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>10.000 CPS</td>
<td>0</td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>30.000 CPS</td>
<td>0</td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>50.000 CPS</td>
<td>0</td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>100.000 CPS</td>
<td>0</td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>250.000 CPS</td>
<td>0</td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
</tr>
</tbody>
</table>